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Abstract

In offering a critical review of the problem we call "ADHD" this paper progresses in three stages. The first two parts juxtapose the dominant voices emanating from the literature in medicine and psychology, highlighting some interdependency between these otherwise competing interest groups. In part three, the nature of the relationship between these groups and the institution of the school is considered, as is the role that the school may play in the psycho-pathologisation of fidgety, distractible, active children who prove hard to teach. In so doing, the author provides an insight as to why the problem we call "ADHD" has achieved celebrity status in Australia and what the effects of that may be for children who come to be described in these ways.

Part I: Medicine-Diagnosis-Medication

Attention Deficit Hyperactivity Disorder is a widely researched topic with scholarship spanning across many disciplines. Of the multiple ways of looking at the lexical label (Mehan, 1996) that is "ADHD", two general knowledge-domains hold court: medicine and psychology. Whilst there is some overlap between the two, the medical model – dominated by developmental paediatrics – posits that the excessive display of a particular constellation of behaviours is said to reflect neurological dysfunction in the frontal region of the brain, an area thought to be responsible for inhibition and attentional control (Barkley, 1997; Tannock, 1998; Holmes, 2004).

General acceptance of this interpretation of challenging behaviour, otherwise known as the "medical model," has led to an increase in prescription of psycho-pharmaceutical medications to children and young people. This applies particularly to the substances claimed most effective, methylphenidate and dexamphetamine sulfate - even though it is still not known exactly what these substances do. Evidence as to the side-effects is mounting though and recently this prompted the US Federal Drug Administration's Drug Safety and Risk Management advisory committee to recommend "black-box warnings" (Pirani, 2006). In March 2006 however, their paediatric advisory panel challenged the recommendation, opting instead for "clearer" labels 'so that people can understand them' (Bridges, 2006).[1] Even though FDA officials acknowledged that there was a 'complete absence of similar reports in children treated with dummy pills' during clinical trials (Bridges, 2006, p. 2), the recommended "black-box warnings" were eventually by-passed because the FDA maintained that it could not point to a 'definitive link between reported psychiatric events and the use of stimulant drugs' (Bridges, 2006, p. 1). This is an interesting point because despite being unable to point to a definitive link between specific biological regions or neurologic components and either (1) the so-called "symptomatology" of ADHD, *or* (2) what psycho-pharmaceuticals do and how (Hynd & Voeller, 1991; Riccio & Hynd, 1993; Swanson, McBurnett, Wigal, Pfiffner, Lerner, Williams, Christian, Tamm, Willcutt, Crowley, Clevenger, Khouzam, Woo, Crinella & Fisher, 1993), proponents of the medical model still posit neurobiological dysfunction as the cause for behaviours said to indicate "Attention Deficit Hyperactivity Disorder" *and* psycho-pharmaceuticals as the solution (Kessler, 1998).

Therefore, and despite widespread criticism, consumption of stimulant medications and the numerous other drugs continually being developed for the ADHD market is still on the rise (Schmitt, 2000). At the same time, the side-effects of these drugs are causing concern, prompting class actions

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against pharmaceutical producers in the US and Australia (Schmitt, 2000; Banks, 2006). Questions regarding the involvement of pharmaceutical companies and their ongoing financial support of lobby groups were first raised over 30 years ago (Conrad, 1975) and still continue today.[2] For example, Lloyd and Norris (pp. 510-512) again questioned 'the role of the drug companies' in the rising diagnosis of behaviour disorder and prescription of psycho-pharmaceuticals to children in 1999. A year later, Conrad and Potter (2000, p. 567-568) drove the point home by describing how the redefinition of ADHD as a lifetime disorder has both expanded and extended the market for psychostimulant medications, ultimately benefiting the pharmaceutical companies who produce them.

It is not hard to see how this happens. Claims made in the popular media that "ADHD is the most heritable condition known to man" and that parents of disruptive school children can become more competent parents if they get diagnosed and treated with stimulants themselves (see SBS, 2007), have no doubt contributed. In Australia, the relationship between doctors and pharmaceutical companies is now being questioned at a political level (Fife-Yeomans, 2007) with state and federal government inquiries into the prescription of stimulant medications announced this year (McDougall, 2007).

But the marketing practices and political influence of pharmaceutical companies, whilst questionable, do not alone explain *why* psychostimulants are the front-runners in response to the problem we call "ADHD". Ultimately, there must be market take-up for such tactics to be successful. Whilst the dominance of the medical model and its insistence upon neurobiological dysfunction and medication as the solution undoubtedly contributes, one question remains: if psycho-pharmaceuticals *do* cause significant side-effects, as corroborated by parent reports, research findings and warnings by regulatory authorities, then why the increase in their use? Why the take-up? In the following section, I consider why drugs have achieved their preferred status and question what other contributing factors might be involved.

The Allure of Medicine/s

Stimulant medication is thought to increase the level of dopamine and norepinephrine between the synapses or neurotransmitters of the brain (Whalen & Henker, 1998), or to increase blood flow to areas of the brain believed responsible for executive control (Holmes, 2004). Apparently, difficulties in pinning down neurological involvement (Hynd & Voeller, 1991; Riccio, Hynd, Cohen & Gonzalez, 1993; Levy, Hay, McStephen, Wood & Waldman, 1997), translate to similar problems in working out not only what stimulants do and how they do it, but also in determining what long-term effect they may have upon developing brain chemistry. Despite the lack of definitive explanation or conclusive proof with regards to either ADHD aetiology or the function of stimulant medication (let alone the long-term educational or health effects, see discussion in Levy, 2001, p.47), the production of psychostimulants has soared since 1990.

In the US, prescriptions for Ritalin 'rose dramatically in the early 1990s and have since levelled off at approximately 11 million per year. In comparison, amphetamine prescriptions, primarily Adderall[3], have increased dramatically… from 1.3 million in 1996 to nearly 6 million in 1999' (see Statistics on Stimulant Use in Gaviria, 2001). Although usage in the UK was more moderate to begin with a significant rise has been noted there too (Lloyd & Norris, 1999). Australian statistics present a slightly different picture however, because dexamphetamine has been subsidised under the Commonwealth Government Pharmaceutical Benefits Scheme and this has influenced usage patterns (Prosser & Reid, 1999). Still, the dramatic increase in the prescription of stimulants in Australia, coupled with a 'disparity in the number of prescriptions for dexamphetamine sulfate dispensed in different parts of Australia' (Mackey & Kopras, 2001, p. i) has not gone unnoticed, triggering a number of Parliamentary inquiries. The most recent report published in 2001 attests that,

> …in 1991, less than 10 000 prescriptions were dispensed for dexamphetamine sulfate. In 1998, nearly 250 000 prescriptions were dispensed for the same drug, an increase of 2400 per

> cent. Over the same period, prescriptions dispensed for Ritalin increased from 13 398 to 96 582, an increase of 620 per cent. (Mackey & Kopras, 2001, p. 4)

Despite the controversy surrounding stimulant prescription rates in Australia, Ritalin was added to the Pharmaceutical Benefits Scheme in 2005 to 'provide patients with a choice of two PBS-listed drugs for ADHD [costing] the PBS between $1.4 and $1.7 million each year (Miranda, 2005, p. 1). Just seven months later, Pirani (2006) reports for *The Australian* that:

> Prescriptions for Ritalin increased tenfold after the drug was listed on the Pharmaceutical Benefits Scheme in August last year, reducing the cost from $49 to $29.50, or $4.70 for concession card holders. More than 5800 prescriptions were written for Ritalin in January this year, compared with 523 in August last year. (Pirani, 2006, p. 13)

Joining Ritalin and Dexamphetamine on the Pharmaceutical Benefits Scheme in 2007 will be Concerta, a long acting form of methylphenidate, and Strattera, a non-stimulant which has been linked to suicide ideation for which it will carry a black-box warning (ABC, 2007; Catalano, 2007). Inexplicably, government subsidisation of medical treatment in the form of medication is on the increase at the expense of more holistic approaches.

Although media reports may indicate otherwise, prescription rights are tightly controlled in Australia. Only paediatricians and psychiatrists can prescribe stimulants (Isaacs, 2006) and even then, only through an authority/no repeat prescription.[4] Unlike the US, prescription medication cannot be advertised in the Australian media. Whilst this may serve as a check on the prescription of stimulants, other public policies work to subvert that aim. Medical services are subsidised by Medicare (i.e. paediatric/psychiatric consultations) rendering a consultation fee of $120 eligible for a rebate of around $80. Until very recently, counselling services have not attracted the same government subsidies.[5] Such fiscal arrangements further push parents towards the medical model, particularly those at lower socioeconomic scales, arguably influencing their acceptance of medication as the "treatment" for problematic behaviour. In Australia, the disproportionate rate of stimulant prescription by socioeconomic status and locality (Prosser & Reid, 1999; Mackey & Kopras, 2001), is undoubtedly influenced by public policies such as these.

At the same time, the pressures of economic rationalism are affecting how doctors deal with the children and parents who arrive in their practice (Halasz, 2001a). This is particularly the case in the US where governmental control via "managed care" mandates the quicker, cheaper solution of a drug instead of the longer process of psychotherapy, family counselling or looking for/at other contributing factors (Manne, 2001).[6] Psychiatrist George Halasz describes the impact of "managerialism" by saying:

> …we witness the emerging medical model as one where professional time is reduced to a (DSM IV) symptom check-list, or a glance at a 'practice guideline' followed by a 'rapid' diagnosis. The end result is usually a prescription for a 'quick-fix' medication, by the end of the first consultation. There is a parallel deskilling of professional practice where doctors lose their capacity to think about and interpret the meaning of the behaviours. This results in more and more 'simple' explanations to account for complex behaviour problems. (Halasz, 2001b, p. 6)

In Australia, social security benefits that privilege the medical model do the same job as the US "managed care" guidelines, albeit more subtly. Children whose behaviour can be described as highly distractible, impulsive and thus, *self-injurious* can also qualify through government welfare agencies for health care benefit/concession cards. These reduce the cost of medication but have *no* bearing on the cost of support services, such as speech therapy. Interestingly, while "ADHD" is not recognised as either a learning difficulty or disability by public institutions of education (Graham, 2006), the behavioural characteristics (or "symptomatology") consistent with a diagnosis of ADHD *are* recognised by institutions of public health and thus, systems of social security. Accordingly, medical

"treatment" of these behaviours and the children who display them is rendered more credible, affordable and accessible than other options.

Whilst it is acknowledged that there are no reliable measures of prevalence (Elliot, 2000), the incidence of ADHD in Australia is estimated to be somewhere between 3-6% of children. However, when we drill down into those numbers we get a markedly different picture. Statistics from the 1997 National Mental Health and Wellbeing Survey are more worrying, estimating a prevalence rate of 19.3% in boys between the ages of 6-12 years and 13% of children between 6-14 years (Sawyer, Arney & Baghurst, 2000). Gender discrepancies are also noted by Davis et al. (2001) as a growing population of boys between the ages of 5-14 diagnosed with ADHD has contributed to a sharp rise in disability and severe restriction rates. Research by Prosser and Reid (1999) which looks at data from both the US and Australia has shown that ADHD diagnosis and prescription rates concentrate at two points: low income and high unemployment.

Although some paediatricians refute the charge that ADHD diagnosis is concentrated amongst vulnerable population groups (Bissett, 2006; Efron, 2006), most telling are the results of a recent Queensland survey of the views of children and young people in care (CCYPCG, 2006). The participants were asked if they were currently taking medication for ADHD. 15.6% of young people (aged 9-18 years), 14.1% of children (aged 5-8 years) and 6.0% of young children (0-4 years) in state and foster care reported that they were. The report also revealed that some were 'taking a combination of up to three medications for their ADHD' (CCYPCG, 2006, p. 10).[7] Disturbingly, statistics both here and overseas show that a much higher percentage of children marked by disadvantage also come to be marked by a diagnosis of ADHD.

At the state level, Western Australia has noticeably higher prescription rates than any other state in Australia (Rushworth, 2006).[8] The disparity prompted a Parliamentary Inquiry which concluded that since prevalence rates are estimated between 3-6% of children, medication may even be under-prescribed in Australia and that higher prescription rates may reflect improvement in diagnostic practices (Mackey & Kopras, 2001). This is a view that appears to be put forward by paediatricians more than psychiatrists (see Rushworth, 2006), for as Levy (2003, p. 91) points out, paediatricians are responsible for the bulk of stimulant prescriptions. This may well be because their shorter consultation times prevent the deeper analysis required to consider other contributing factors (Levy, 2003; Isaacs, 2006), or because paediatricians stand to benefit from their involvement with pharmaceutical companies (SBS, 2007), and/or because many lack sufficient understanding of the cognitive architecture of the academic curriculum and how this, together with standardised testing is changing the nature of contemporary schooling (Graham, 2007). I will return to discuss the educational context in more detail in the final section of this paper.

When considering whether Australia is medicating for social disadvantage, Issacs (2006, p. 546) reports that 35% of all consultations by general paediatricians are for behavioural problems and, when surveyed, 'although 75% of general paediatricians in Australia felt that their knowledge about ADHD was deficient, 75% of general paediatricians prescribed stimulants to children with behavioural problems at least once a week'. In response to Isaacs, Efron (2006) counters that medication use is not the central issue in the current approach to ADHD in children. Rather, he maintains, 'it is the fragmented nature of the service delivery system that often is not able to meet the needs of this vulnerable group of children' (Efron, 2006, p. 548). Naming family support and school-based services as the biggest unmet needs, Efron is in agreement with Isaacs in his call for increased funding for mental health, community and school support services. Efron (2006) is incorrect however, in his belief that children with learning difficulties qualify for individualised education plans. Across Australia, IEPs are only written for *eligible* children – those with a diagnosis of a severe impairment falling within the disability categories *recognised* and *supported* by individual departments of education (see Appendix). The relationship between schooling practices and the classification of

children is an important issue, which I will return to in the third section of this paper. In the meantime, the question I ask here, one that is seldom asked in relation to the "problem" of ADHD, is not just *who* benefits, but who benefits most?

The (Dis)Illusion of Medicine/s

Psychostimulant medications are marketed as having a "paradoxical effect" upon individuals exhibiting behaviours consistent with those making up the diagnostic triad for ADHD: hyperactivity, inattention and distractibility (APA, 1994). However, research has since shown that psychostimulant medication affects *all* individuals with some level of improvement in concentration and energy (Swanson et al., 1993; Purdie, Hattie & Carroll, 2002). The variable *now* appears to be the degree of effect. Most problematically though, psychostimulant medication can have severe side-effects; including appetite suppression, insomnia, teeth grinding, tics, tachycardia, emotional instability, growth retardation, drug-induced psychosis and more (Levy, 1993; Purdie et al., 2002). Also any so-called "therapeutic" effect is temporary (Selikowitz, 1995).

Even the nature of that "therapeutic" effect is the subject of debate, as comprehensive research has demonstrated that the 'estimated effect on *behaviour* is much larger than the estimated effect on *achievement*' (emphasis added, Swanson et al., 1993, p. 156). Despite the research evidence, some proponents of the medical model make claims to the contrary:

> In a child who is receiving an appropriate medicine, all other forms of treatment, such as educational and psychological intervention, will be more effective. These medicines help the child's brain to function like the brains of other, normal children; they do not sedate the child. Most, but not all, children will be helped by medication. It is important to note that these medicines offer treatment, not a cure. This means that their effect on behaviour lasts only as long as the medicine remains in the child's body, although any skills the child has learned will persist. (Selikowitz, 1995, p. 151)

This kind of literature is marketed to parents who may make the decision to medicate because they believe it will help their child by removing "behavioural barriers" possibly affecting their learning progress. As Teeter (1991, p. 5) acknowledges however, 'neurochemical studies consistently show that while medication reverses hyperactivity, learning deficits persist'. This was still the case when Purdie, Hattie and Carroll conducted a meta-analysis of interventions in 2002. They concluded that 'the present findings do not indicate that such flow-over effects to learning or achievement occur' (Purdie et al., 2002, p. 88) and that the major impact of medication was on improved behaviour, more benefiting teachers and parents than the child.

Against solid research evidence, arguments that advocate the medication of children for their educational or learning benefit just do not stack up. The question then begs: "therapeutic" for whom? If medication is effective in reducing behavioural "symptoms" as indicated in the literature and relatively ineffective on learning, then what is the medication of children and young people *really* doing? What is the goal? If pharmaceutical suppression of behaviour does not translate to better academic achievement, as one might assume it would, then *what* exactly is medication achieving and for *whom*?

Indeed, stimulant medication is only found to be "effective" (that is, when medication acts to suppress problem behaviours) in about two thirds of children diagnosed with ADHD (Swanson et al., 1993). With those children who *do* respond "positively", the side-effects require that dosage be carefully regulated, so that the effects are sufficiently dulled to allow the child to eat and fall asleep at night. Once the drugs wear off, the child and his/her parents are right back to square one – at the unacceptable end of the behavioural "continuum" (Levy et al., 1997). Interestingly, this is where it appears the complicated interdependency between medicine and psychology comes into play and where the medical and psychological paradigms diverge only to (re)converge.

Part II: ADHD & The Psychologies

Despite a general lack of agreement as to whether there is a discrete biological causal link (Hynd & Voeller, 1991; Riccio et al., 1993; Levy et al., 1997), proponents of the medical model continue to posit neurobiological dysfunction (a hypothesis that appears to have gained the status of truth) as the cause for disorderly behaviour, which leads to 'medical practitioners having the primary role in interventions' (Atkinson & Shute, 1999, p. 124). Nonetheless, certain strands of psychology have become deeply imbricated in the industry surrounding child behaviour "disorderedness". The loudest voices with the most impact upon the educational context have emanated from developmental and cognitive-behavioural fields contributing to a "within-child" deficit-model view that has proved extremely attractive to the institution of the school. In many instances, psychometric testing against normative standards remains one of the means by which "abnormal" children become defined and located (Laurence & McCallum, 1998).

Despite the unreliability of psychometric testing, particularly with respect to "diagnosing" ADHD (Wolraich, Lambert, Baumgaertel, Garcia-Tornel, Feurer, Bickman & Doffing, 2003), a child's performance on psychometric sub-tests can determine whether their problems in school will be classified (and supported) as a "recognised" disability or whether their difficulties in learning are caused by their problems with attentional control and, thus viewed as problems to be "managed" through either medication or psychological techniques (Graham, 2006). With respect to the latter, complicated response-cost self-management token-economies are not only difficult for teachers to run in conjunction with their always-already crowded curriculum and teaching responsibilities, but such practices do nothing to address a child's learning needs when, for example, they may have difficulty understanding abstract or complex instructions. In addition, other psychological services operating from a more holistic base can be very difficult to access. Public services are plagued by long waiting lists and private services are prohibitively expensive (Bussing, Zima, Perwein, Belin & Widawski, 1998; Gifford Sawyer, Rey, Arney, Whitham, Clark & Baghurst, 2004).

Given that the effectiveness of psychological interventions is equivocal, plus that more holistic psychosocial support is hard to access and expensive, it is no small wonder that many parents feeling the pressure resort to medicating their children, despite the overwhelming majority calling for more support (Gifford Sawyer et al., 2004, p. 1362; Singh, 2004; Efron & Conncannon, 2005). However, I want to stress that their call does not simplistically mean that contemporary parents are less competent than those of previous generations, that we have a much greater number of "disordered" children than a decade ago or that we have an "ADHD epidemic" on our hands. Nor should it be rearticulated as such.

Newspeak or Psy-Fi? Calming the War of the Worlds…

The change to social structures in individualised Western societies, culminating in the demise of the extended family, kinship and shared responsibility for child rearing, is seldom recognised for the disabling impact it has upon parents. Neither is it readily acknowledged that fast capitalism, whilst producing healthy GDP and current account figures, has been unconducive to social health and wellbeing (Pusey, 2003). Public policy informed by a neoliberal political rationality borrowed from the US and UK (Beeson & Firth, 1998), has forged a 'new Australia, with its culturally and linguistically diverse population, its volatile economy characterised by new and spatialised stratifications of wealth, and new pathways from school to work, community and civic life' (Luke, 2003, p. 103). However, the effects of the new economies upon family life are generally ignored. Parents, particularly mothers, are criticised for working more and having less time for their children (Manne, 2005; Devine, 2006). In many cases though, mothers have been forced into working longer for less (Pusey, 2003; Luke, Graham, Sanderson, Voncina & Weir, 2006), with the traditional absence

of working fathers translating to greater restrictions on their flex-ability to (co)parent, in a way many modern families would like (Singh, 2003; Goward, 2006).

Enter cognitive-behavioural psychology. The schism arising between the desired and the actual is what Foucault (1980b, p.107) maintains, 'rendered the discourse of the human sciences possible'. In other words, these forms of psychology help to effect a shift in focus, diverting public attention 'from a structural economic and national problem' by reconfiguring it as an 'individualistic and personalised problem' (Marshall, 1997, p. 5). Within the disciplinary institution of the school, the abnormalisation of child behaviour via psychological discourses that speak to self-regulation and reason privilege the knowledge of "professionals" over that of the pedagogue. These discourses legitimise and bring into operation the practices that derive from them (daily report cards, time-out, behaviour withdrawal programmes, detention, suspension, alternative site placement and expulsion), whilst simultaneously disguising their exclusionary logic.

In the main, psychological practitioners generally defer to the medical explanation of neurological dysfunction and the prescription of psycho-pharmaceuticals as a "first-line approach" (Wallace, 1999). However, because medication has failed to provide a solution to the "problem" it was meant to solve, psychologists have been successful in arguing for a multi-modal approach to the management of ADHD - predominantly through behaviour modification techniques and programs (Atkinson & Shute, 1999; Little, 2003). The ensuing reciprocal relationship that has developed between certain medical and psychological practitioners has thus been the *condition of possibility* (Foucault, 1977) for the expansion of the concept of child behaviour "disorderedness" - for a protracted war between the two paradigms would weaken rather than strengthen claims on *both* sides.

This interdependency, which I depict in Figure 1 below, is of mutual benefit to the medical and psychological fields. Despite research that demonstrates medication effects only behaviour and has relatively no impact on the higher-order and longer-term processes of learning (Hynd & Voeller, 1991; Teeter, 1991; Swanson et al., 1993; Purdie et al., 2002), the dominant "reach before you can teach" ethos (Green & Chee, 1997) allows medical practitioners to acknowledge the psychological perspective, whilst giving precedence to the medical model. By the same token, having developed a working relationship with medical practitioners through multi-modal treatment arrangements, and by virtue of the increasing presence of "professionals" in schools, psychological practitioners have secured a legitimate place in the space surrounding the "behaviourally disordered" child.

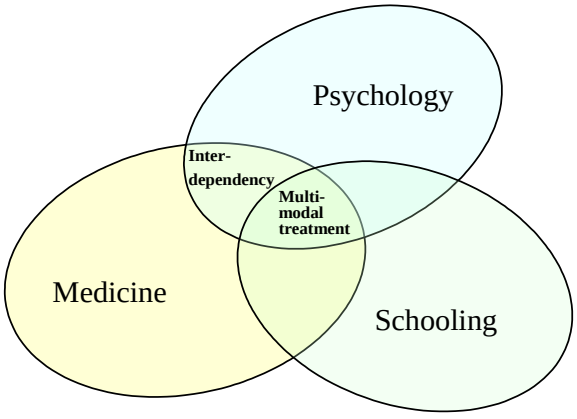

Figure 1: ADHD & Reciprocity

The psychological literature features compelling arguments that behaviours said to be consistent with the ADHD diagnostic triad can be influenced by extrinsic factors outside the child's control, such as environment (Pellegrini & Horvat, 1995; Christian, 1997; Levine, 1997; Panksepp, 1998). In addition, there appear the other usual suspects - familial and socioeconomic status, maternal levels of

education, abnormal child/mother attachment, abuse, pre and postnatal trauma - the literature on which is too numerous to list (see discussion in Whalen & Henker, 1998). Accordingly, many psychologists argue for a psychosocial understanding of problematic behaviour however, within the field of education psychology is dominated by developmentalism which, in tending to cancel out any focus on the social and further narrowing it to the individual child, privileges the use of cognitive-behavioural techniques. The problem confronting the psychosocial perspective is that there appears no escaping the suppression of "ADHD" symptoms with 'active medication management' (Levy, 2001, p. 45), the occurrence of which privileges medical conceptualisations of ADHD, the involvement of the neurological system, and thus, the need for individualised responses.

Interestingly, several major studies have failed to demonstrate that psychological interventions (intensive or otherwise) provide any benefit over medication alone (Whalen & Henker, 1998; Hechtman, Abikoff, Klein, Weiss, Respitz, Kouri, Blum, Greenfield, Etcovitch, Fleiss & Pollack, 2004).[9] This same research shows that multi-modal treatment models, whilst generally considered the best option in the management of ADHD (Atkinson & Shute, 1999; Elliot, 2000), do not live up to either expectation or promise (Levy, 2001). This may be because multi-modal models tend to privilege cognitive-behavioural "treatments", rather than educational (as in pedagogical) interventions via adjustment to teaching programs through differentiation of curriculum and instruction methods.

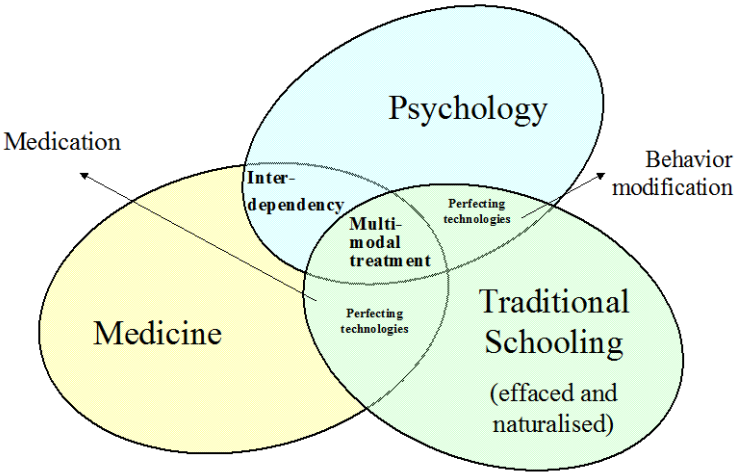

Figure 2: Adjusting the "disorderly" child and obscuring the pathologies of the school

Semantics aside, in relation to "ADHD" the dominant views emanating from psychology and medicine come together on one crucial point – in the main, the focus remains on the "problem child". Whether their behaviour is thought to be influenced by neurological, biological or environmental factors, both medicine and psychology offer "perfecting technologies" (Baker, 2002), either pharmaceutical or cognitive-behavioural means of making adjustments to the child. I have illustrated their origin and function, as well as their beneficial effect for the school, in Figure 2 below. Medication and behaviour modification are of particular appeal to institutions of schooling for their use has the effect of obscuring the underlying educational, structural and sociopolitical forces affecting the child (and his/her family and community). In effect, they assist in naturalising the existing order of things.

This is because both medication and behaviour modifying "interventions" function to shift the focus away from what might be wrong with *schooling* to centre only on what is "wrong" with the child. But this can also have devastating effects for the children who come to be described in such ways (Graham, 2007), leading to their enrolment in withdrawal-mode behaviour modification programs, alternative site placement, suspension and exclusion (Bouhours, Bryer & Fleming, 2003).

Part III: Schooling Attention Deficit Hyperactivity Disorders

Much of the literature that looks to ADHD in relation to schooling focuses upon what can be done to facilitate the "inclusion" of the ADHD child into the "regular" or "mainstream" classroom (Bradshaw, 1998; Sava, 2000). However, privileging the status quo in this way has led to an emphasis on what adjustments can be made to the child, through medicinal and/or cognitive-behavioural means, leaving pedagogy, classroom environment and schooling practices relatively unaltered. It appears that the residual notion of "a mainstream" means that teachers and schools can stick to one-size-fits-all approaches, deviating only slightly when met by "deviance". However conveniently, "deviance" remains the domain of the human sciences and the structural arrangements of traditional schooling encourage teachers to siphon off their "problematic" students to the "experts" of abnormality milling in and around the domain of the school; guidance officers, withdrawal-mode behaviour modification programs, alternative-site placement centres, psychologists, doctors, paediatricians and psychiatrists.

Research in the US shows that in the majority of cases teachers are the first to suggest a diagnosis of ADHD (Sax & Kautz, 2003). In 1999, Colorado was the first legislature to require school boards to adopt a policy prohibiting school personnel from recommending psychotropic drugs to students (Kientz, 2004). Other states such as Connecticut followed, passing laws prohibiting 'teachers, counselors and other school officials from recommending psychiatric drugs for any child', however, this policy 'does not prevent school officials from recommending that a child be evaluated by a medical doctor' (Schmitt, 2001, p. 1). The mere mention of hyperactive, distractible, impulsive behaviour is often enough to set the "ADHD" ball in motion though (Graham, 2006). While psychiatrist Andres Martin at the Yale University Child Study Centre may argue that 'schools have no business practicing psychiatry' (Martin as cited in Schmitt, 2001, p. 1), he does acknowledge the influence of schools and teachers who tell parents that if they do not medicate their children, they cannot be in the classroom. This also happens in Australia. Earlier this year, a public primary school located in a disadvantaged area of Sydney made headlines by threatening to formally exclude an eight year old girl unless her mother medicate her for 'suspected ADHD' (Hull, 2006, p. 1). This is not an isolated incident. Many more parents have since contacted the media claiming that their child's school principal, teacher, and/or guidance officer has suggested they either see a paediatrician about ADHD or demanded that the child be medicated in order to admitted back into school (Passmore, 2007; SBS, 2007). While this is strenuously denied by some, case studies built from the archival analysis of school records indicates that this does indeed happen.[10]

(Mis)Handling Randle

Randle (a pseudonym) was 10 years old and in Grade 6 when he was referred by a Queensland state primary school to an alternative-site placement centre. He had attended several schools since preschool and was described by these past schools as "lacking remorse when using obscene language or causing physical injury to others," "malevolent" and "extremely revengeful". Other areas of concern were cited as: unacceptable social behaviours observed both in class and in the playground; difficulty making and sustaining friendships; and, unpredictable behaviours resulting in peers fearing him. The intensive behaviour modification program implemented at the alternative-site placement centre (hereafter referred to as A-SPC) was implemented to equip Randle with an ability to (1) control his anger and not hurt others; (2) keep his hands, feet and objects to himself; (3) demonstrate appropriate social skills; and (4) treat people with respect.

During his six month enrolment at the A-SPC however, it became apparent that Randle experienced significant learning difficulties and this was something that had not been adequately assessed or addressed previously. While his ability in reading had been placed at "grade level," his Reading Recovery level was recorded at just 22 upon enrolment in the A-SPC.[11] In maths and written language, Randle was considered "somewhat below grade", however the A-SPC found that Randle was only comfortable with Grade 4 mathematics and was assessed at "approximately Grade 5 level"

in written language. In the area of verbal communication, his new A-SPC teacher reported that he was "far below grade". A speech pathology assessment conducted during his enrolment at the A-SPC found that Randle had "severe delays in expressive language skills" and "moderately delayed receptive language skills".[12] This was the first speech/language assessment ever conducted with Randle, arguably representing continual oversight and serious gaps in support service provision. This was emphasised in the final report from the Centre, where it was stated (in bold) that: **"It should be noted that concerns have been raised regarding Randle's speech and language from as early as his first year at primary school."**

From a young age, Randle's difficulty with expressive and receptive language and the effect of that upon his ability to cope with the demands of school life was perennially overshadowed by the celebrity status of "ADHD" and the allure of a medicinal fix. Referral requests and reports from his past schools suggested that Randle be assessed for "ADHD-like behaviours," oppositional defiance (ODD) and conduct disorder (CD). Early in his enrolment at the A-SPC, the area guidance officer noted significant discrepancy in Randle's communicative abilities and recommended he be assessed for possible Speech/Language Impairment.[13] This was conducted 3 months later, however one week after this language assessment took place Randle's teacher was also asked to complete the Connor's Teacher Rating Scale, the results of which were interpreted as indicative of the DSM-IV "Mainly Inattentive" sub-type of Attention Deficit Hyperactivity Disorder. Disturbingly, Question 79 in the Connor's Scale states: "Speech problem? (describe)" and asks teachers to rate presence on a scale of 0, 1 and 2. In response, Randle's teacher did not circle any scale instead writing: "SLI questioned result – needs 6 mth intense work". However, there is no record of any dispute regarding Randle's communicative difficulties or the validity of the speech assessment.

The referring school had raised the possibility of medication for "ADHD-like behaviours" with the A-SPC, and the inquiry was relayed by the Centre "with a view to medical testing and a trial of medication" in a referral to Child Youth and Mental Health Services (CYMHS). Despite constantly having to pick up Randle from school for disruptive behaviour, his mother was vehemently opposed to medication arguing that he was "just a normal boy". The resident psychiatrist at CYMHS agreed responding that the presence of a "significant language disorder… would account largely for his behaviour problems" and that s/he did not "see a place for medication yet," advocating instead for "speech therapy intervention first".

During primary school, Randle spent a great deal of time in withdrawal behaviour modification programs, particularly one called "Reflecting About Problems" (RAP). Not surprisingly, one of the most consistent reasons for Randle getting in trouble in school was coded "NFI" or "Not Following Instructions". He would then be disciplined with time-away or a trip to the principal's office but would often get in trouble again for "Not Respecting Others" or "Not Respecting Property". Analysis of his escalating behaviour in subsequent referrals to RAP points to his increasing frustration and anger, however whilst it was understood that Randle was unable to "ask questions regarding his work as he does not have the language required," it did not seem equally understood that he would not have the language to successfully interpret and respond to instructions nor appropriately express his frustration when his attempts resulted in sanction. Instead of dealing with Randle's language difficulties in a comprehensive and systematic way, successive schools pursued the red-herring of "ADHD-like behaviours" and the possibility of medication. When asked how *he* felt, ten year old Randle said:

> I don't deserve to be in this type of world. I deserve to be in hell… I want to get a knife and kill myself… I've told Mum that I want to kill myself – she told me not to be silly. I hate myself and everyone else hates me.

There is more to suggest that schooling plays an influential role in the problem we call "ADHD". Research by the Australian Bureau of Statistics has found that due to the increased diagnosis of

Attention Deficit Hyperactivity Disorder in young boys, there has been a rise in disability and severe restriction rates which - in peaking at age 5 and remaining steady until age 15 - directly correlate with compulsory schooling ages (Davis, Beer, Gligora & Thorn, 2001). In the UK, researchers surveyed teachers and found that factors such as class size influence the perceived incidence of ADHD (Glass & Wegar, 2000). They also found that a high percentage of teachers support the use of medication, even when they *do not* believe ADHD to be a biological condition. This led Glass and Wegar (2000, p. 418) to conclude that, 'the problem may lie in the educational system, not within the child'. It makes sense then to look more closely at systems - and the influences upon them.

Policy/s in Australia: Support Services for Students with Additional Learning Needs

Departments of education in each state of Australia indicate that their funding model for support services has either moved or is in the process of moving towards an educational need profiling system, rather than a strictly categorical system of resource allocation (Luke et al., 2006). In theory, this means that a child's eligibility for additional support for learning should be based on the level of support needed and thus, level of funding required to enable the child to both access the curriculum and engage in school activities. This is how it works in Finland (Itkonen & Jahnukainen, 2007) but not in Australia – not in reality anyway. The difference is subtle but profound in its effect.

In Finland, "diagnoses" do not fulfil the gate-keeping function they do here and every student who needs it is entitled to additional assistance. There, results indicating poor academic achievement act as a barometer indicating the need for additional support. In Australia though, a student can significantly underachieve (as did Randle) but without an official diagnosis of a disability recognised and supported by that system neither they or their school will gain access to the kind of funding needed to ensure meaningful support. That is; above and beyond school-based group learning support services (the availability of which is thin at the best of times, and hence is often by withdrawal mode and short-term in nature), access to more long-term and comprehensive support initiatives is dependent upon the student's eligibility for external funding (or tied grants) which are, in turn, tied to "recognised" disability category criteria (see Appendix).

Every state in Australia recognises four basic disability support categories: visual impairment, hearing impairment, physical impairment and intellectual impairment. From there, they diverge with some recognising only one or two more categories of disability (eg. New South Wales: psychological disability; Queensland: Autistic Spectrum Disorders and Speech/Language impairment). Some states offer more expansive conceptions of disability (eg. Western Australia lists 8 categories: Global Developmental Delay, Intellectual Disability, Autistic Spectrum Disorder, Vision Impairment, Deaf and Hard of Hearing, Severe Mental Disorder, Physical Disability, and Severe Medical/Health Condition), although eligibility criteria can function to exclude particular children who display particular kinds of behaviours (Graham, 2006).

The implications of narrow eligibility criteria for school-based support services are profound for children who can be described using ADHD nomenclature (Graham, 2006). For example, whilst the Department of Education in Tasmania recognises Psychiatric Disability, this category is further split to exclude disruptive behaviour disorders. Tasmania's Psychiatric Disability category includes severe psychiatric conditions, such as Schizophrenia, Bi-polar Disorder, Major Depressive Disorder, Severe Obsessive Compulsive Disorder and Severe Anxiety Disorder, but the relevant eligibility criteria documentation explicitly stipulates that 'Disruptive Behaviour Disorders, eg. Conduct Disorder, Oppositional Defiant Disorder do not qualify for consideration for the Register of Students with Severe Disabilities' (see DET, 2006). Nonetheless, research shows that students whose behaviour can be described in these ways are those that teachers feel most ill-equipped to teach inclusively (Fields, 2006). Schools and teachers are critically over-stretched and the result, in Queensland at least, is that children who present a problem to the system end up in paediatrician's

offices.[14] Whether they come out with a diagnosis of Attention Deficit Hyperactivity Disorder or like Randle, Speech/Language Impairment (or like Mark, another randomly-selected student enrolled in the A-SPC during 2000-2004 who was finally diagnosed with Autism) can have huge impact on the child's experiences at school, influencing how the child is perceived and the ways in which they are supported.

This is because a diagnosis of Speech/Language Impairment (SLI) or Autistic Spectrum Disorder (ASD) is eligible for external support funding. Access to such funding provides schools with teacher-aide time to provide either an "extra pair of hands" in the classroom or enable relief from face-to-face for teachers to plan program adjustments, write individualised education plans (IEPs), attend professional development, contribute to learning support team meetings and so on. Children who receive a diagnosis of Attention Deficit Hyperactivity Disorder are not eligible for the same support funding, however, children who can be described in these ways still experience significant learning difficulties and can be extremely difficult to teach.

This may also help to explain the rapid increase in diagnosis of Autistic Spectrum Disorders (ASD) in Queensland (Burke, 2006) and NSW (Vinson, 2002). While some parents have complained that teachers are pushing for children diagnosed as having ADHD to be re-diagnosed with ASD so that they are eligible for increased school support services (Burke, 2006), the less-than-attractive alternative is stimulant medication and an increase in disciplinary responses; such as time-out, detention, suspension and exclusion (Bouhours et al., 2003; Howard, 2005). It has been argued that because there is no funding for children with "ADHD," there is no incentive for schools and teachers to push for that diagnosis (SBS, 2007), however this is a disingenuous argument at best. In the new age of "accountability measures", there is enormous pressure on public schools and teachers to justify the academic achievement of an increasingly diverse population of students. If these students are not achieving the benchmarks, parents, education departments, state and even federal governments want to know why. In this environment, while a diagnosis of ADHD does not achieve funding support, it does provide a medical explanation for under-achievement and enables schools to out-source the "problem-child" to the medical and psychological domains - whereupon the "problem" may be neutralised via a prescription for stimulant medication, or the child withdrawn from class for behaviour modification programs or enrolment in a special school.

Conclusion

"Special needs" resourcing policy is one of the means by which education systems construct categories between which support funding can be shared but because "recognised" support categories are tight, children who can be described with ADHD nomenclature find themselves in an amorphous space somewhere between "disability" and "normality" (Graham, 2007a). Whilst categories may function as a means to distribute resources, "boxes" can also serve as a political mechanism to place limits on who can lay claim to expensive resources (Graham, 2007a). While schools offer learning support services, these budgets are extraordinarily lean and many children miss out because of the way their difficulties in school are described. Children diagnosed with ADHD or whose difficulties can be described in ADHD diagnostic nomenclature do not "qualify for additional classroom support, leaving children to fend for themselves in a system which sometimes seems designed to thwart their efforts" (Efron & Conncannon, 2005). For these children, systems rely on teachers to plug a widening gap. The load is lessened when difficult children are diagnosed with something that qualifies for support funding or when parents oblige the school by shifting the problem to their local paediatrician. Often, the result is a prescription for stimulant medication.

This is not the fault of teachers, more a by-product of economic rationalism in public service provision (see Quiggin, 1999a; b; Quiggin, 2001). The problem is that education systems have attempted to embrace inclusive education principles, whilst public services are being stripped by governments adopting neoliberal market-based policies. However, constant reductions in public

expenditure on education and health only become noticeable when systems fail, or when taxpayers contemplate having to pay more to fix a service from which those who can are leaving. If we are to reverse these trends and secure inclusive education in Australia, then policy flaws which compromise this need to be engaged with in an authentic way. Further, it urgently needs to be recognised that this runs counter to a neoliberal political rationality that views education as a cost to be constantly reduced or, at best, an economic lever with which to influence competitive advantage in globalised markets.

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State	APPENDIX 1 Recognised Disability Support Categories (school eligible for supplementary departmental funding)									
	Physical Impairment	Intellectual Impairment	Hearing Impairment	Vision Impairment	Severe Behaviour Disorder	Severe Language Disorder	Autistic Spectrum Disorders	Psychological/ Severe Mental Disorder	Global Developmental Delay	Severe Medical/Health Condition or Critical Needs
NSW	✓	✓	✓	✓				✓		
QLD	✓	✓	✓	✓		✓	✓			
VIC	✓	✓	✓	✓	✓	✓	✓			✓
WA	✓	✓	✓	✓			✓	✓	✓	✓
NT✦	✓	✓	✓	✓		✓	✓	✓		✓
ACT	✓	✓	✓	✓			✓	✓		✓
TAS	✓	✓	✓	✓			✓	✓		✓
SA	✓	✓	✓	✓		✓	✓		✓	

✦ Northern Territory disability support categories currently under review.

Notes:

[1] This suggests that the "problem" of stimulant medication relates not to what is contained in the packet, nor in how it is being prescribed but instead, with those administering the contents. Often the blame comes to rest with the parent who, even when following medical advice, still finds themselves at the pointy end of the media-blame game Myler, C. (2006). Fever phobia is bad medicine for children. Brisbane: Queensland University of Technology. 25th April. Available at: http://www.news.qut.edu.au/cgi-bin/WebObjects/News.woa/wa/goNewsPage?newsEventID=8182.. For example, a hyperlink to access a media release on Queensland University of Technology's homepage reads "Parents overdose children with medication". The article describes the research into the management of fever by parents, saying 'international studies showed more than 30 per cent of parents overdosed children, while a quarter underdosed youngsters with drugs like paracetamol and ibuprofen - or both. As part of Australia's first study into how parents manage fever in children, Ms Walsh has reviewed 24 years of worldwide research and found mismanagement of fever is a universal trend. She said while little had changed in what parents knew about fever, there was some concern about the new trend of alternating different types of medication". Problematically, only half-way through the story is it acknowledged that parents do so under medical advice. "A lot of parents are now being advised to give their children paracetamol and then follow up with some ibuprofen maybe two hours later". However, the damage is done and the nurses and doctors giving the advice to parents have been effaced from the scene.

[2] This includes CHADD in the US and ADDISS in the UK. These relationships are the subject of a class action suit in the US, see Schmidt (2000).

[3] Adderall is not available in Australia.

[4] This is a policing system with aims similar to the Schedule II/triplicate prescription system in the US.

[5] Since the 2006 budget, up to 12 appointments with a psychologist per year are now part subsidised by the Federal Government.

[6] Despite the wealth of research in speech/language that looks to the effects of language difficulties on behaviour, speech therapy services remain a predominantly private cost. Such therapy is usually ongoing and intensive and out of financial reach for many families.

[7] The medications used include the psycho-stimulants (Ritalin, Dexamphetamine and Concerta), anti-depressants (SSRIs and trycyclics) and anti-psychotics, such as Respiridone.

[8] Number of prescriptions dispensed for dexamphetamine sulfate, 1999-2000 per 1000 population was 43.2 for Western Australia. The next closest state was Tasmania with 16.3 (See Mackey & Kopras, 2001, p. 5).

[9] One major flaw in the research that looks to comparative studies of psychological therapy + medication versus medication alone is that comparison of effectiveness against educational intervention alone is rarely done.

[10] Archival records from an alternative-site placement centre in South East Queensland were obtained via application to Education Queensland Central Office and the school principal. Ethical clearance was obtained through: (1) the Human Ethics Research Committee at the Queensland University of Technology, (2) Education Queensland Central Office and (3) the Principal of the Centre. Three completely de-identified student files from the period 2000–04 were provided to the researcher by centre staff.

[11] This increased to 28 during his enrolment at the A-SPC.

[12] In accordance with Speech/Language Impairment Eligibility criteria a student must present at least 2 standard deviations below the mean to be eligible for external funding provision under the Educational Adjustment Program. Randle had an expressive language ability more than 2.5 standard deviations below the mean and thus would be considered Speech/Language Impaired and eligible for disability support funding. Unfortunately for Randle, other reasons for disruptive behaviour such as speech/language disorders must be identified before appropriate support is provided. Because "behaviour" took precedent, each of the schools he attended prior to the A-SPC failed to assess and address Randle's difficulties in learning.

[13] Speech/Language Impairment (SLI) is one of six categories of disability recognised and supported by Education Queensland (see Appendix).

[14] Queensland is the only state in Australia that requires a medical diagnosis of impairment for disability support eligibility. The incidental effect of this particular policy is a direction towards the medical model. This may influence how particular behaviours are viewed.